IN THE CLAIMS

Amend the claims as follows:

Cancel claim 16, without prejudice

17. (Amended) The method of claim [16] 39, wherein the primers consist of 25 to 40 nucleotides.

18. (Amended) The method of claim [16] 39, further comprising, labeling said PCR products, denaturing said labeled PCR products, and contacting the denatured labeled PCR products with a nucleotide sequence complementary to a fusion partner nucleotide sequence.

21. (Amended) The method of claim [16] 39, wherein one of the primers consists of a sequence containing a cassette of 40 to 60 nucleotides and 10 to 20 T nucleotides, and the second primer is a random repeat of nucleotides.

22. (Amended) The method of claim [16] 39, wherein said part of the genome adjacent to the target gene is a fusion partner.

23. (Amended) The method of claim 22, comprising:

a) subjecting the patient's genome DNA or RNA to the action of a compound capable of cleaving or specifically inhibiting the DNA or RNA of the target gene, the fusion of which is to be detected,

b) performing said [asymmetrical] PCR,

c) reacting the PCR products thus obtained with two probes specific for each target gene, one being upstream, and the other one being downstream, and with probes complementary to known fusion partners,

a positive detection on the upstream probe and a negative detection on the downstream probe, corresponding to a rearrangement of the target genes, and a negative detection for the known partner genes corresponding to the absence of fusion with a known fusion partner, or alternatively,

d) reacting the PCR products with a plurality of probes bonded to a miniaturized support, and detecting hybridization of the probes with the PCR products, if any.

25. (Amended) The method of claim 24, comprising

a) the RT synthesis of a cDNA pool from the patient's RNA, using primers consisting of a 5' cassette with 30 to 35 nucleotides with a 3' sequence of 6 or 9 random nucleotides,

b) a PCR amplification using a first primer located on the MLL exon 5, as specific sense primer, the 3' primer being the same on each cycle and complementary to the oligonucleotide cassette used in the RT step.

29. (Amended) The method of claim [16] 39, wherein said pathology is leukemia.

30. (Amended) The method of claim [16] 39, wherein said pathology concerns solid tumors.

32. (Amended) A kit for the [diagnostic] detection and identification method according to claim [16] 39, comprising reagents for carrying out the PCR and [the]

detection step, anchored primers, and primers [selected in the group consisting of primers] specific for the target genes [gene and random partners].

34. (Amended) A kit according to claim 32, further comprising [probes selected from the group comprising] probes complementary to the target [gene] genes and probes complementary to known fusion partners.